America. Herr Klebs's examination of the amber Mollusca produced a similar result, and in this case Eastern Asiatic types were also found. There is, however, nothing at all surprising in this—it was only to be expected; for relations have long been known to exist between the fauna and flora of North America and Eastern Asia on the one hand and between this and our Central European Tertiary fauna and flora on the other. Herr Klebs instances the tuberculated *Unios*, the Paludinæ, &c. Still more striking would be this agreement if the at present merely provisional assignment of the above-mentioned lizard to the immediate neighbourhood of *Knemidophorus* should be confirmed upon closer examination. The works of Caspary and Conwenz on the flora of amber also lead mainly to the same result.

Herr Klebs concludes by remarking that, with the exception of the Psocidæ and Gasteropoda, some fifty specimens in all, no portion of the amber fauna has as yet been exhaustively worked out; and he appeals to entomological specialists in particular to put themselves in communication with him, in order that the study of the rich material which he has amassed may be undertaken in a manner befitting its importance.

LXI.—*Observations on some Fossil Fishes from the Lower Carboniferous Rocks of Eskdale, Dumfriesshire.* By R. H. Traquair, M.D., F.R.S.

Since the publication of the first part of my "Report" on the fossil fishes obtained by the Geological Survey of Scotland in Eskdale and Liddesdale a considerable quantity of new material has been collected in this district, as well by the Survey as also by Mr. Jex, collector to Mr. Damon, of Weymouth, and by Mr. T. Stock and others. Prior to the publication of a second part of the "Report," I propose in the present instance to make a few remarks on some of the specimens which were procured from the late Mr. Robert Damon for the Edinburgh Museum of Science and Art.

Acanthodes nitidus, A. S. Woodward.

Characterized by having the ventral spines more posteriorly situated than in other Carboniferous species of the genus. I had intended naming this species, but as my friend Mr. A. Smith Woodward informs me that he had independently diagnosed and named it in the second part of his 'Catalogue of the Fossil Fishes in the British Museum,' now in the press, I have pleasure in adopting his name.

Rhadinichthys elegantulus, Traq.

Rhadinichthys Geikiei, Traq. Trans. Roy. Soc. Edinb. xxx. 1881, p. 25, non Proc. Roy. Soc. Edinb. ix. 1877, p. 438.
Rhadinichthys Geikiei, var. *elegantulus*, Traq. Trans. Roy. Soc. Edinb. xxx. 1881, p. 27.
Rhadinichthys delicatulus, Traq. ibid. p. 29.

In the Proc. Roy. Soc. Edinb. 1889–90, pp. 397, 398, I have given my reasons for referring the original *Rhadinichthys Geikiei* to *Rh. carinatus*, Ag., and also for believing that the Eskdale fish is a distinct species, for which the term *elegantulus*, which I had used to designate a variety, must now be adopted. From this species I can no longer separate *Rh. delicatulus*.

Acrolepis ortholepis, Traq.

Elonichthys ortholepis, Traq. Geol. Mag. (3) vol. i. 1884, p. 7.
Acrolepis ortholepis, Traq. Proc. Roy. Soc. Edinb. 1889-90, p. 398.

The Edinburgh Museum possesses a splendid specimen of a large Palæoniscid, 25½ inches in length, which, from the scale-ornament, I must refer to the same species as the fish in the British Museum to which six years ago I gave the name of *Elonichthys ortholepis*. In the present specimen, however, the great thickness of the scales, along with their shape, indicate that its position is in *Acrolepis*, a position corroborated by the absence of serrations along the posterior margins of the scales. The original "*Elonichthys*" *ortholepis* is, it may be added, an immature example 12 inches in length.

Styracopterus fulcratus, Traq.

Holurus fulcratus, Traq. Trans. Roy. Soc. Edinb. xxx. p. 46.

The original specimen of *Holurus fulcratus*, Traq., in the collection of the Geological Survey of Scotland is a mere fragment. By a mistake its locality was given as Glencartholm, whereas it was in reality found at Tarras Foot.

The Geological Survey officers have since acquired a number of additional specimens from the same locality which show that the species does not belong to *Holurus*, but to a new genus closely allied to *Benedenichthys* *, Traq., from the Carboniferous Limestone of Belgium. As these specimens belong to the Survey, I must defer their description to the forthcoming second part of the "Report."

* *Benedenius*, Traq., in de Koninck's 'Faune du Calcaire carbonifère de la Belgique,' pt. i. 1878, p. 15. A critic in the Ann. & Mag. Nat. Hist. (5) vol. vi. 1880, p. 97, having pointed out that the name "*Benedenius*" is preoccupied, I propose to alter it to *Benedenichthys*, and at the same time to state that I have become convinced that, though it presents many resemblances to the Platysomidæ, it is after all more Palæoniscid, and should be restored to the family Palæoniscidæ.

MESOPOMA, gen. nov.

Body fusiform, suspensorium only very slightly oblique, but the maxilla shaped as in typical Palæoniscidæ. Dorsal fin nearly opposite the anal.

I propose to separate from the genus *Canobius* the species *pulchellus* (*op. cit.* p. 51) and *politus* (*op. cit.* p. 53), on account of the more typically Palæoniscid configuration of their facial bones. I should have included them in *Rhadinichthys* were it not for the very slight obliquity of the suspensorium, which excludes them from the definition of the genus along with another species from the Pumpherston oil-shales, which I recently described as *Rh. macrocephalus* *. These species will therefore in future stand as *Mesopoma pulchellum*, *politum*, and *macrocephalum*.

Mesolepis tuberculatus, sp. n., Traq.

Of this I have seen no really complete specimens. Such as have occurred show a small deep fish, about 4 inches in length and 2 in depth, with a large head occupying about one third of the entire length. From the structure of the head, so far as it is seen, the position of the dorsal fin which commences at the culminating part of the back, and the shape of the scales, which are high and narrow, there can be no doubt as to the species being referable to *Mesolepis*. The scales differ from those of any known species in being ornamented externally with a sharply defined tuberculation, the tubercles often tending to become confluent transversely.

Locality. Glencartholm, Eskdale. Type in Edinburgh Museum.

Mesolepis has not hitherto been recorded from strata below the horizon of the Millstone Grit.

Mesolepis rhombus, sp. n., Traq.

Length 5 inches; depth of body just in front of dorsal fin $2\frac{1}{2}$ inches; length of head contained a little more than three times in the total. Dorsal fin commencing at culminating point of back, high in front, then falling away to a fringe which ends close to the tail-pedicle; anal fin short-based, triangular, acuminate; caudal deeply cleft, heterocercal. Ventral fins small; pectorals not seen. Scales rather small, narrow, their surface ornament badly preserved, but apparently consisting of rounded tortuous ridges, sometimes passing into tubercles, whose direction is mainly parallel with the anterior and posterior borders of the scale. Dentition not visible; head conformable to the type of *Mesolepis*.

* Proc. Roy. Soc. Edinb. for 1889-90, p. 398.

This second new species of *Mesolepis* is at once distinguishable from *M. tuberculatus* by the scale-ornament, and from the Coal-measure species *M. Wardi*, Young, by the greater proportional size of the head and the peculiar smallness and narrowness of the scales.

Locality. Glencartholm, Eskdale. Type in Edinburgh Museum.

Cheirodopsis Geikiei, Traq.

More perfect examples of this interesting Platysomid show that not only were the dorsal and ventral peaks of *Cheirodus* wanting, but that it possessed well developed ventral fins which are absent in the allied genus.

Tarrasius problematicus, Traq.

Prof. Zittel, in the ichthyological part of his 'Handbuch der Palæontologie,' has provisionally placed this extraordinary fossil fish in the Dipnoi *. More recent acquisitions show that such a view of its position is quite untenable, the pectoral fin, unknown previously, being rounded and with only a very small basal lobe.

We now know the form of the entire fish, and, though the osteology of the head is not sufficiently clearly exhibited to decide its systematic position with absolute certainty, the obtusely lobate character of the pectoral fin seems to point towards the Crossopterygii. The teeth are small and obtuse. The anterior part of the body is naked, the small Acanthodian-like scales only commencing behind the abdominal region. There is no trace of ventral fins.

The locality of the original specimen was in the "Report" erroneously stated to be Tarras Foot. All the examples as yet known were found at Glencartholm; nevertheless the name of the genus must stand.

LXII.—*Descriptions of new Species of* Crocidura.

By G. E. Dobson, M.A., F.R.S.

Crocidura Grayi.

Like *C. Horsfieldii* †, but considerably larger, although the tail is not longer than in that species and is similarly nearly naked; the fur (so far as can be ascertained from an inspec-

* I. Abtheilung, 3 Band, p. 129.

† *Crocidura Horsfieldii*, Tomes, = *C. retusa*, Peters.